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Suzanne W. Dobbs

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EXAMINER

LOVE, TREVOR M

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/686,012	Applicant(s) DOBBS ET AL.	
	Examiner TREVOR M. LOVE	Art Unit 1611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05/02/2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 22-83 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18, 22-83 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Receipt of Amendments/Remarks filed 04/01/2008, and subsequent Amendments, Remarks, and Affidavits filed 05/02/2008 are acknowledged. **Claims 1-18 and 22-83** are pending in this application. Claims 19-21 and 84 stand cancelled.

Claim Rejections - 35 USC § 112

The Examiner is **withdrawing** the rejection under 35 USC § 112, second paragraph, in response to Applicant's amendment removing the vague and indefinite terminology from **claims 8-18, 22, 27-32, 50-51, 61-66, and 79**.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-18, 22-32, 36-53, 57-59, 61-62, and 73-83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Madrange nee Dermain et al (4,173,627).

Madrange nee Dermain et al teach a pressurized container containing a hair lacquer spray having reduced inflammability. The reference discloses the use of hair lacquers to maintain the hair in a proper shape by spraying the composition onto the hair. See column I, lines 5-10. The liquid phase contains at least one of the following 1) **0-94% a lower alkanol, specifically ethanol**, propanol, isopropanol, or butanol; 2) 0-35% a solvent; 3) **0-25% a ketone diluent, an alkyl acetate diluent, specifically methyl acetate**, or a hydrocarbon particularly alkanes. See column 3, lines 35-51. The examples utilize ethanol. For instance, example 2 teaches 2g of a resin, 0.5g plasticizer, 20g bromotrifluoromethane, 10g trichloroethane, 25g methylene chloride, 10g butane/propane, and 32.5g ethanol. Note that methylene chloride is not designated a volatile organic compound. Thus, the VOC does not exceed 80%. Example 1 comprises

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0.5g of a plasticizer, 2.5g of a resin, 15g bromotrifluoromethane, 5g Dibromo-1,1,2,2-tetrafluoroethane (propellant), 20g isobutane (the alkane diluent), and 22g ethanol.

The hair lacquer contains 10-85% of a propellant phase wherein the instant dimethyl ether, propane, and isobutane with bromotrifluoromethane are taught. See examples and column 2, lines 25-35. The composition incorporates the 0.5-10% instant resins, specifically vinyl acetate/crotonate/vinyl neodecanoate copolymer which can be neutralized with the instant neutralizing agents, specifically sodium hydroxide and 2-amino-2-methyl-1-propanol. See column 4, line 19 to column 5, line 6 and examples. The composition contains other additives, specifically perfumes and silicones. See claim 10.

Although, Madrange nee Dermain et al suggests a combination of ethanol and methyl acetate, this is not an *explicit* teaching.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to look to the guidance provided by Madrange nee Dermain et al and utilize ethanol and methyl acetate. One would have been motivated to do so since the general disclosure of Madrange nee Dermain suggests the combination of at least one of (a) lower alkanol, (b) a solvent, and (c) a ketone diluent such as methyl acetate for the liquid phase in an upper amount of 25% and it readily apparent to a skilled artisan that one can have a combination of at least two in the liquid phase. Moreover, Madrange nee Dermain teaches in example 1, a composition comprising 0.5g of a plasticizer, 2.5g of a resin, 15g bromotrifluoromethane, 5g Dibromo-1,1,2,2-tetrafluoroethane (propellant), 20g isobutane (the alkane diluent), and 22g ethanol. It

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would have been obvious to a skilled artisan to substitute the isobutane diluent with the instant methyl acetate diluent since Madrange nee Dermain teaches the diluent may be selected from ketones, C3-C7 alkanes, i.e. isobutene, or an alkyl acetate such as methyl acetate.

With regard to the amount of neutralizer, although Madrange nee Dermain et. al do not explicitly disclose the concentration, it is the position of the examiner that the concentration an obvious parameter to a skilled artisan since the concentration would be dependent on the amount required to neutralize the resin. Thus, a skilled artisan would have been motivated to add a sufficient amount to yield a neutralized resin.

Lastly, it should be noted that the instant weight percents overlap with that of the prior art and it is the examiner's position that the concentrations of each individual components are manipulatable parameters wherein a skilled artisan can readily optimize the concentrations of the prior art. With regard to claim 26, the instant claims recite *approximately* 30% of the methyl acetate and Madrange nee Dermain teaches a maximum limit of 25%, it is the examiner's position that 25% and instant *approximately* 35% are within an obvious range wherein a skilled artisan would have been motivated to manipulate the concentration through routine experimentation. Further, it is noted that applicant has not defined "approximately" and "about" to mean exactly. See MPEP 2111.01.

Claims 1-18, 22-32, 36-53, 57-59, 61-62, and 73-83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Madrange nee Dermain et al (4,173,627) in view of JP 08187277.

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Madrange nee Dermain et al teach a pressurized container containing a hair lacquer spray having reduced inflammability. The reference discloses the use of hair lacquers to maintain the hair in a proper shape by spraying the composition onto the hair. See column 1, lines 5-10. The liquid phase contains at least one of the following 1) **0-94% a lower alkanol**, specifically ethanol, propanol, isopropanol, or butanol; 2) 0-3.5% a solvent; 3) **0-25%** a ketone diluent, an alkyl acetate diluent, specifically **methyl acetate**, or a hydrocarbon particularly alkanes. See column 3, lines 35-51. The examples utilize ethanol. For instance, example 2 teaches 2g of a resin, 0.5g plasticizer, 20g bromotrifluoromethane, 10g trichloroethane, 25g methylene chloride, 10g butane/propane, and 32.5g ethanol. Note that methylene chloride is not designated a volatile organic compound. Thus, the VOC does not exceed 80%. Example 1 comprises 0.5g of a plasticizer, 2.5g of a resin, 15g bromotrifluoromethane, 5g Dibromo- 1,1,2,2-tetrafluoroethane (propellant), 20g isobutane (the alkane diluent), and 22g ethanol.

The hair lacquer contains 10-85% of a propellant phase wherein the instant dimethyl ether, propane, and isobutane with bromotrifluoromethane are taught. See examples and column 2, lines 25-35. The composition incorporates the 0.5-10% instant resins, specifically vinyl acetate/crotonate/vinyl neodecanoate copolymer which can be neutralized with the instant neutralizing agents, specifically sodium hydroxide and 2-amino-2-methyl-1-propanol. See column 4, line 19 to column 5, line 6 and examples. The composition contains other additives, specifically perfumes and silicones. See claim 10.

Although, Madrange nee Dermain et al suggests a combination of ethanol and methyl acetate, this is not an *explicit* teaching.

JP 08187277 teaches a method of masking irritating alcohol odor, specifically ethanol, by utilizing methyl acetate or ethyl acetate in the amount of 0.1-10%. The masking action does not damage the properties of the lower alcohol and is utilized in cosmetics, drinks, and perfumes that contain lower alcohol. JP teaches the R represents a short alkyl chain. See abstract.

Furthermore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to combine the teachings of Madrange nee Dermain et al and JP and utilize ethanol and methyl acetate. Firstly, Madrange nee Dermain suggests the combination of at least one of (a) lower alkanol, (b) a solvent, and (c) a ketone diluent for the liquid phase and it readily apparent to a skilled artisan that one can have a combination of at least two in the liquid phase. Thus, one would have been motivated to combine the lower alkanol with the Madrange's suggested ketone diluent (methyl acetate) in particular since JP teaches ethyl acetate or methyl acetate mask the odor of lower alcohols in a cosmetic composition. Therefore, one would have been motivated to particularly select methyl acetate as the choice for component (c) to eliminate unpleasant odor produced by the ethanol since Madrange utilizes ethanol as preferred component (a) in all the examples. Further a skilled artisan would have expected similar results in using methyl acetate since Madrange clearly suggests methyl acetate as a suitable diluent in the composition and the examples teach the combination of all three components (a, b, c) in one composition.

With regard to the amount of neutralizer, although Madrange nee Dermain et al do not explicitly disclose the concentration, it is the position of the examiner that the concentration an obvious parameter to a skilled artisan since the concentration would be dependent on the amount required to neutralize the resin. Thus, a skilled artisan would have been motivated to add a sufficient amount to yield a neutralized resin. Lastly, it should be noted that the instant weight percents overlap with that of the prior art and it is the examiner's position that the concentrations of each individual components are manipulatable parameters wherein a skilled artisan can readily optimize the concentrations of the prior art. With regard to claim 26, the instant claims recite *approximately* 30% of the methyl acetate and Madrange nee Dermain teaches a maximum limit of 25%, it is the examiner's position that 25% and instant *approximately* 35% are within an obvious range wherein a skilled artisan would have been motivated to manipulate the concentration through routine experimentation. Further, it is noted that applicant has not defined "approximately" and "about" to mean exactly. See MPEP 2111.01.

Response to Arguments to Madrange by itself and in view of JP '277

The "Second Declaration of Suzanne Dobbs" under 37 CFR 1.132 filed 05/02/2008 is insufficient to overcome the rejection of claims **1-18, 22-32, 36-53, 57-59, 61-62, and 73-83** based upon **Madrange nee Dermain et al (4,173,627) in view of JP 08187277** as set forth in the last Office action.

Applicant gives examples in the declaration of methyl acetate combined with ethanol, acetone, MEK, and ethyl acetate. Said examples claim to give sufficient

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evidence to overcome the finding of obviousness. Said declaration states that said the combination of methyl acetate with ethanol is superior to methyl acetate combined with acetone.

Firstly, applicant only truly compares acetone and ethanol since the other experiments were not completed. Secondly, applicant has failed to identify an objective standard by which to measure said odor. For instance, the declaration does not compare ethanol/methyl acetate, acetone/methyl acetate, and straight methyl acetate. Therefore, it is inconclusive as to which component is actually covering up the "unpleasant odor". Furthermore, applicant has not identified the pertinence of the appearance of the sample.

In view of the foregoing, when all of the evidence is considered, the totality of the rebuttal evidence of nonobviousness fails to outweigh the evidence of obviousness.

Applicant retains the same arguments as set forth previously that neither Madrange nor JP '277 teach at least methyl acetate and 20- 55% ethanol. Applicant argues that the examiner has not provided any motivation to combine ethanol and methyl acetate other than hindsight reasoning. Applicant argues that Madrange alone does not suggest the instant invention since Madrange teaches that neither (a), (b), or (c) are required. Applicant argues that the specific combination of ethanol and methyl acetate is not disclosed or suggested.

Applicant's arguments filed 05/02/2008 have been fully considered but they are not persuasive. It continues to be the examiner's position that Madrange nee Dermain suggests the combination of an alcohol such as ethanol and a diluent such as methyl

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acetate. The examiner directs applicant to column 3, lines 37-52 which teaches that liquid phase of the invention of Madrange nee Dermain et al comprises 0-94% of an alcohol such as ethanol and 0-25% of a diluent such as methyl acetate. Applicants are directed to MPEP 2123 - Patents are Relevant as Prior Art for All They Contain.

"Disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiment." Although it is noted that Madrange teaches each component may be contained in an amount of 0%, the examples clearly teach the presence of lower alkanol, particularly ethanol. Thus, it is quite clear that the use of a lower alcohol such as ethanol, i.e. component (a), is preferred since all the examples contain ethanol. Further, the examples teach a combination of (a), (b), and (c). For instance, examples teach the use of component (a) ethanol, component (b) methylene chloride, and (c) isobutane (hydrocarbon alkane). Therefore, the examples teach a combination of all three components. It is the examiner's position that the disclosure of Madrange nee Dermain by itself renders the instant invention obvious over itself since 1) Madrange nee Dermain teaches a combination of (a), (b), and (c) in the examples and it would have been obvious to substitute the exemplified isobutane diluent in example 1 with Madrange's preferred methyl acetate diluent since Madrange's clearly suggests the diluent may be selected from a ketone, an alkyl acetate, or a C3- C7 alkane. Applicant has not provided any showing of unexpectedness.

Regarding applicant's argument that it is not a question whether methyl acetate can be used but rather a question of whether the specific combination of methyl acetate

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and ethanol can be used, the examiner points out that the clearly the prior art teaches a combination of (a), (b), and (c). Thus, the substitution of isobutane in example 1 would provide a composition comprising a mixture of ethanol and methyl acetate in the claimed concentrations.

Regarding applicant's arguments that there is no motivation to extract two components from a plethora of possible ingredients, it is the examiner's position that Mandrange does not provide a plethora of combinations. Mandrange teaches component (a) is a lower alkanol selected from 4 species are disclosed: (1) ethanol, (2) propanol, (3) isopropanol, or (4) butanol and ethanol is exemplified and preferred. Component (b) is a solvent selected from two species: (1) 1, 1, 1-trichloroethane and (2) methylene chloride. Component (c) is selected from 3 species (1) a ketone diluent, (2) an alkyl acetate diluent, specifically methyl acetate, and (3) a hydrocarbon, wherein methyl acetate is preferred. Ethanol and methyl acetate are taught to be preferred species.

Applicant argues that although JP teaches the combination of ethanol and methyl acetate, the combination does not teach at least 10% methyl acetate. Applicant argues that the amount of methyl acetate is relative to the amount of alcohol. Applicant argues JP '277 teaches the masking effect may be comprised if it exceeds 10%. Thus, applicant argues that the most JP '277 teaches is 5.5% and this is significantly less than the claimed amount. Applicant argues that the examiner has not provided any motivation to combine the references. Applicant argues that Mandrange nee Dermain

does not suggest the desirability of masking the irritating odor of the alcohol and is concerned with reducing flammability.

It is the examiner's position that Madrange nee Dermain is rendered obvious in view of the JP reference which clearly provides a motivation to utilize methyl acetate as the diluent in the liquid phase. Although applicant argues the examiner has not provided any motivation to combine the references, the examiner disagrees. The suggestion of the combination of ethanol and methyl acetate comes from Madrange nee Dermain itself and JP merely provides further motivation since JP teaches it is known that alcohol has an irritating smell in cosmetics and methyl acetate masks this unpleasant odor. Therefore, the motivation to specifically utilize methyl acetate as the diluent of choice is for its dual function of acting as the diluent in the composition and for its odor masking properties. The examiner has clearly provided a motivation for the combination and applicant has not addressed this motivation.

Regarding applicant's argument to the weight percent, it should be noted that the examiner does not rely on JP to teach the weight percent of methyl acetate since Madrange nee Dermain teaches methyl acetate may be used in an amount of 0-25% of methyl acetate; the examiner only relies on JP to provide the specific motivation to combine ethanol and methyl acetate. Additionally, the examiner points out that JP '277 teaches that if methyl acetate exceeds 10%, the solubility properties of the lower alcohol **may be** comprised. See page 5 of the English translation. It is noted that this is not conclusive. Further, JP '277 does not state that if methyl acetate exceeds 10% then the masking capabilities of the alcohol may be comprised, as argued by applicant. This is a

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critical difference. JP '277 functions to solubilize a fragrance and lipophilic components. Thus, JP '277 contemplates the concentration of ethanol in relation to ethanol's ability to solubilize the fragrance component. However, Madrange does not require this property, i.e. Madrange's composition does not contain a perfume. Further, Madrange's composition has other solvents.

Therefore, it is the examiner's position that Madrange nee Dermain in view of JP '277 renders the instant invention obvious, absent the showing of unexpectedness of the instant invention.

Applicant argues unexpected results in that Madrange nee Dermain does not recognize that methyl acetate is not a volatile organic compound, and therefore, can not fully appreciate the superior results that are achieved. The examiner respectfully points out that it is known in the art that methyl acetate is a non-VOC and the prior art does not have to identify this known property. Furthermore, the prior art teaches the use of 0-25% methyl acetate, and therefore, would have experienced said unexpected results.

Applicant argues unexpected results from the combination of ethanol and methyl acetate, in that the ethanol reduces the unpleasant odor associated with methyl acetate. The "Second Declaration of Suzanne Dobbs" states that methyl acetate has an unpleasant odor which could effect marketability of said hair care product. It is the position of the examiner that the tests set forth in said declaration are inconclusive with respect to whether the ethanol is acting on the methyl acetate, or vice versa. Furthermore, it is disclosed in JP that methyl acetate, when added to ethanol reduces the characteristic unpleasant odor associated with ethanol. Therefore, it is the position

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of the examiner that the "ether sweet fruity" odor associated with methyl acetate (the good scent company, page 1, under organoleptics) would expectedly be weakened as it masked the "fermenting" odor associated with ethanol. Furthermore, the pleasantness of an odor is relative. One may consider any odor to be either pleasant or unpleasant.

Applicant also argues, as evidenced in the "Second Declaration of Suzanne Dobbs", that the addition of ethanol to methyl acetate reduces the detrimental effects of methyl acetate on fabrics. It is the position of the examiner that the product is described as being a hair care composition, and is not designed for application to acetate fabric fibers, rather to hair fibers. Furthermore, while neither the prior art cited, nor the examiner have identified the lack of detrimental effects to acetate fibers as a motivation for the combination of ethanol and methyl acetate, motivation has been cited above for the combination and said combination is taught in the prior art.

Therefore, it is the examiner's position that Madrange nee Dermain in view of JP '277 renders the instant invention obvious, even in light of the recently presented "unexpected results".

Claims 33-35, 56, 60, and 63-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Madrange nee Dermain et al (4,173,627) by itself or in view of JP 08187277, in further view of Chuang et al (5,830,439).

As set forth above, Madrange nee Dermain teach a hair spray that contains a liquid phase comprising at least one of the following 1) 0-94% a lower alkanol, specifically ethanol, propanol, isopropanol, or butanol; 2) 0-35% a solvent; 3) 0-25% a

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ketone diluent, a alkyl acetate diluent, specifically methyl acetate, or a hydrocarbon.

See column 3, lines 35-51. Madrange nee Dermain et al also disclose the use of difluoroalkane as a suitable propellant. JP 08187277 teaches the a method of masking irritating alcohol odor, specifically ethanol, by utilizing methyl acetate or ethyl acetate in the amount of 0.1-10%.

Madrange nee Dermain et al do not explicitly teach the incorporation of water into the composition or 1, 1-difluoroethane.

Chuang et al teach an aerosol hair spray resin composition, see abstract.

Chuang teaches that the fixative hair resin is conventionally dissolved in an inert carrier such as a lower alcohol, for instance, ethanol, an aqueous ethanol solution, isopropanol, etc. Further, the aerosol contains conventional propellants such as 20/80 blend of propane/isobutane, dimethyl ether, difluoroethane, carbon dioxide, etc. See column 4, lines 30-37.

It would have been obvious for one of ordinary skill in the art at the time the invention was made to look to the teachings of Chuang et al and utilize ethanol that is not absolute (anhydrous) and utilize an aqueous ethanol solution. One would have been motivated to do so since Madrange nee Dermain et al do not disclose that the ethanol must be absolute or denatured ethanol; thus it would be obvious to one of ordinary skill in the art at the time of the invention to use ethanol that is not anhydrous since Chuang teaches the conventional use of either. It should be noted that ethanol that is not anhydrous contains about 5% water and thus reads on the instant minimum concentration of water, i.e. 0.01%. Moreover, the manipulation of the amount of water

as a co-solvent is a manipulatable parameter that is within the skill of an ordinary artisan.

Furthermore, one would have been motivated to look to Chuang et al and utilize the instant difluoroethane since Chuang discloses this is a conventional propellant utilized in the art. Moreover, one would have expected similar results since Madrange nee Dermain also teaches the use of difluoroalkane as a suitable propellant.

Response to Arguments

Applicant argues that the teachings of Madrange and JP fail to teach the instant invention. Applicant argues that Madrange and JP fail to defeat the patentability of the independent claims, thus this rejection would also be rendered unobvious.

Applicant's arguments filed 05/02/2008 have been fully considered but they are not persuasive. It is the examiner's position that Madrange in view of JP render the instant claims obvious for the reasons discussed above and thus the instant rejection of the claims in view of Chuang is also rendered obvious.

Claims 54-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Madrange nee Dermain et al (4,173,627) by itself or in view of JP 08187277, in further view of Morawsky et al (5,599,524).

As set forth above, Madrange nee Dermain teach a hair spray that contains a liquid phase comprising at least one of the following 1) 0-94% a lower alkanol, specifically ethanol, propanol, isopropanol, or butanol; 2) 0-35% a solvent; 3) 0-25% a ketone diluent, a alkyl acetate diluent, specifically methyl acetate, or a hydrocarbon.

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See column 3, lines 35-51. JP 08187277 teaches the a method of masking irritating alcohol odor, specifically ethanol, by utilizing methyl acetate or ethyl acetate in the amount of 0.1-10%. JP teaches the R represents a short alkyl chain.

Madrang nee Dermain et al do not specifically teach the instant fixatives.

Morawsky et al teach a low VOC hair spray wherein the composition contains conventional hair resins known in the art, including instant polymer of claim 55 and the polymers taught in Madrang nee Dermain (vinyl acetate/crotonate/vinyl neodecanoate copolymer). See column 2, lines 15-30.

It would have been obvious for one of ordinary skill in the art at the time the invention was made to look to the teachings of Morawsky et al and utilize the instant polymer in the hair spray formulation of Madrang nee Dermain. One would have been motivated to do so since Morawsky teaches the instant polymer is a conventional hair resin utilized in the art.

Response to Arguments

Applicant argues that the teachings of Madrang and JP fail to teach the instant invention. Applicant argues Madrang and JP fail to defeat the patentability of the independent claims, thus this rejection would also be rendered unobvious.

Applicant's arguments filed 05/02/2008 have been fully considered but they are not persuasive. It is the examiner's position that Madrang in view of JP render the instant claims obvious for the reasons discussed above and thus the instant rejection of the claims in view of Morawsky is also rendered obvious.

Claims 1-18, 22-23, 27-51, 56-57, 61-68, and 76-83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heeb et al (4,243,548) in view of JP 08187277.

Heeb teaches a pressurized aerosol formulation such as hair spray. Generally the composition contains 12.9-18% of water, 4-6% carbon dioxide (propellant), 6-8% dimethyl ether (propellant), 33-43% organic solvents specifically ethanol and/or isopropanol, 32-35% of methylene chloride, and 0.5-3.1% of an active. More specifically, the solution for instance contains 13.62 to 14.35 percent by weight of water, 4.57 to 4.27 percent by weight of carbon dioxide (propellant), 6.95 to 7.76 percent by weight of dimethyl ether (propellant), 32.86 to 34.06 percent by weight of isopropanol and/or ethanol and/or n-propanol, 3.72 to 4.6 percent by weight of acetone and/or methoxyacetone, 35.0 to 33.93 percent by weight of methylene chloride and/or 1,1,1-trichloroethane, and 2.08 to 2.47 percent by weight of active compounds. Note that methylene chloride and acetone are not considered to be a volatile organic compound. Thus, the VOC does not exceed 80% or 55%. Suitable solvents include acetone, ethyl alcohol, n-propanol, isopropanol, methyl acetate, ethyl acetate, etc. individually or as mixtures. See column 2, lines 50-60.

Example 1 teaches a hair spray containing 13.70g of water, 34.69g of methylene chloride, 33.65 isopropanol, 3.97g acetone, 6.95g dimethyl ether, 0.10g perfume oil, and 2.37g N-vinylpyrrolidone and vinyl acetate. Example 7 teaches 13.70g of water, 34.69g of methylene chloride, 11g isopropanol, 11g ethanol, 11.65 n-propanol, 3.97g acetone, 6.95g dimethyl ether, 0.10g perfume oil, and 2.37g N-vinylpyrrolidone and vinyl

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acetate. Example 4 discloses the use of 7.76g of dimethyl ether, 4.27g carbon dioxide, and 33.93g of trichloroethane. Example 15 replaces acetone in example 1 with 3.97g ethyl acetate. Example 16 utilizes methyl acetate in a room deodorant compositions.

Although Heeb utilizes methyl acetate in example 16, Heeb does not teach the specific combination of ethanol and methyl acetate in the example.

JP 08187277 teaches the a method of masking irritating alcohol odor, specifically ethanol, by utilizing methyl acetate or ethyl acetate in the amount of 0.1-10%. The masking action does not damage the properties of the lower alcohol and is utilized in cosmetics, drinks, and perfumes that contain lower alcohol. See abstract.

It would have been obvious for one of ordinary skill in the art at the time the invention was made to combine the teachings of Heeb et al and JP and substitute the exemplified ethyl acetate with methyl acetate. One would have been motivated to do so since JP teaches the use of ethyl acetate or methyl acetate to mask the odor of lower alcohols such as ethanol in a cosmetic composition. Therefore, it is prima facie obvious to substitute one functional equivalent for another with the expectation of similar results since the prior art teaches the use of either for the same purpose. Further, it is the examiner's position that the concentrations of the individual components are manipulatable parameters wherein a skilled artisan can readily optimize the concentrations of the prior art. For instance, the instant claims recite approximately 4-6% of the fixative resin and Heeb teaches the use of .5-3.1% of the active (resins), thus it is the examiner's position that 3.1% and instant approximately 4% are within an obvious range wherein a skilled artisan would have been motivated to manipulate the

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concentration through routine experimentation. Also, the claims recite approximately 40-50% or 45-50% of the alkanol, whereas the prior art teaches 35-40%, again it is the examiner's position that 40% and instant approximately 40% or 45% respectively are within an obvious range wherein a skilled artisan would have been motivated to manipulate the concentration through routine experimentation. The claims recite approximately 15-60% methyl acetate and JP teaches 10% and thus it is the examiner's position that 10% and instant approximately 15% respectively are within an obvious range.

Response to Arguments

It is made of record that applicant identified an error in the previous office action. In the previous Office Action this rejection errantly implied it was withdrawn. However, the rejection was intended to be maintained, as evidenced by the arguments and response that followed the errant text. Furthermore, it was a clearly in error, and applicant readily identified it as such, and responded appropriately as to not slow prosecution.

Applicant argues that the examiner has not provided any motivation to combine ethanol and methyl acetate other than hindsight reasoning. Applicant argues, although JP teaches the combination of ethanol and methyl acetate, the examiner has not provided any motivation to combine the references. Applicant argues that although JP teaches the combination of ethanol and methyl acetate, the combination does not teach at least 10% methyl acetate. Applicant argues that the amount of methyl acetate is relative to the amount of alcohol. Applicant argues JP '277 teaches the masking effect

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may be comprised if it exceeds 10%. Thus, applicant argues that the most JP '277 teaches is 5.5% and this is significantly less than the claimed amount.

Applicant's arguments filed 05/02/2008 have been fully considered but they are not persuasive. Firstly, the examiner directs applicant to column 2, lines 50-60 wherein Heeb teaches the organic solvent used include ethyl alcohol, n-propanol, iso-propanol, methyl acetate, ethyl acetate, etc, individually or as mixture, with a preference for isopropanol, ethanol, or propanol as the organic solvent. Thus, it is the examiner's position that Heeb itself suggests the combination of various solvents including alkanols and methyl acetate. Moreover, JP further provides the motivation to utilize methyl acetate as the co-solvent. JP teaches it is known that alcohol has an irritating smell in cosmetics and methyl acetate masks this unpleasant odor. Therefore, the motivation to specifically utilize methyl acetate in a mixture with ethanol is for its odor masking properties. JP teaches 0.1-10% provides this odor masking effect. Thus, the examiner has clearly provided a motivation for the combination and applicant has not addressed this motivation. Further, JP teaches it is well known in the art that alcohols such as ethanol have a distinctive odor and it has been an endeavor of the prior art to find a way to mask this odor, and that adding methyl acetate is able to accomplish this.

Therefore, it is the examiner's position that Heeb in view of JP '277 renders the instant invention obvious, absent the showing of unexpectedness of the instant invention.

Applicant further argues via the "Second Declaration of Suzanne Dobbs" that unexpected results have been achieved by the combination of methyl acetate and

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ethanol. First, that ethanol masks the "unpleasant odor" of methyl acetate, and secondly, that the addition of ethanol reduces the detrimental effects of methyl acetate on acetate fibers. The examiner respectfully brings to applicant's attention that the affidavit of Suzanne Dobbs is inconclusive as to whether the ethanol is acting to mask the methyl acetate, or if the methyl acetate is simply better at masking the characteristic odor of ethanol than the odor of acetone. Furthermore, said hair care composition is intended for use on hair. It is not disclosed that the composition is intended for use on acetate fibers. Furthermore, while neither the prior art cited, nor the examiner have identified the lack of detrimental effects to acetate fibers as a motivation for the combination of ethanol and methyl acetate, motivation has been cited above for the combination and said combination is taught in the prior art.

Therefore, it is the examiner's position that Heeb in view of JP '277 renders the instant invention obvious, even in light of the recently presented "unexpected results".

Pertinent Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 6,464,960 discloses that the California Air Resources Board (CARB) defines VOC as substances with a vapor pressure of >0.1 mm Hg at 20 degree Celsius or as substances with 12 or less carbon atoms. Further, '960 discloses that on the basis of this definition, a number of substances, for example carbon dioxide, methylene chloride, acetone, methyl acetate, fluorochloro-carbons and fluorocarbons

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are excluded because of their low or zero photochemical ozone creation potential (POCP).

Finality

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

None of the claims are allowed at this time. This action is made Final.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TREVOR M. LOVE whose telephone number is (571)270-5259. The examiner can normally be reached on Monday-Thursday 7:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sharmila Landau can be reached on 571-272-0614. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TL

/Sharmila Gollamudi Landau/

Supervisory Patent Examiner, Art Unit 1611